



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appl'n. of: Joseph P. Ligoci, Sr. et al.

Att'y Doc. No.: 460-001PA

Serial No.: 09/663,155

Group Art Unit: 2635

Filed: 09/15/2000

Examiner: Yves Dalencourt

For: Frequency Activated Neutralizing
Generator System

**MAIL STOP RCE
COMMISSIONER FOR PATENTS
P.O. Box 1450
ALEXANDRIA, VA 22313-1450**

RECEIVED

JUL 29 2004

Technology Center 2100

**DECLARATION OF INVENTOR
ELIAS J. GOLETSAS
PURSUANT TO 37 CFR § 1.132**

I, Elias J. Goletsas, declare under the penalty of perjury, that:

1. I am one of the inventors of the invention described and claimed in the above-identified patent application and in the Amendment about to be filed with this declaration.

2. I have reviewed the Amendment including the newly presented claims, 15-34. Claims 15-34 claim a method of verifying and disabling a suspect vehicle being observed by a law enforcement officer. The claimed methods require an officer's direct and proximate involvement with the suspect vehicle. The officer must be on hand to observe the suspect vehicle. (See step (a) of claims 15 and 31) The officer is given a certain amount of control at the scene involving the suspect vehicle. He or she has the power to disable the vehicle only after an authorization sequence is performed. (See steps (d)-(i) of claim 15 and steps (d)-(l) of claim 31) The claimed methods do not give the officer unbridled discretion and control. Unless authorization takes place, the officer is powerless to automatically disable the vehicle.

3. The authorization sequence occurs between the central database station and the suspect vehicle, even though in the preferred embodiment, communication between the central database station and the suspect vehicle occurs through the officer's law enforcement unit ("LEU"). The officer is effectively removed from the authorization process. The vehicle

authorization codes (“VACs”) are stored at the central database station and the authorization (i.e., matching of the VAC from the central database with the VAC stored in the suspect vehicle) takes place at the suspect vehicle. In the preferred embodiment, the LEU merely relays the VAC to the suspect vehicle. The officer is not given access to the VAC. From this arrangement, a certain amount of security and privacy is achieved.

4. The vehicle control unit (“VCU”) of the suspect vehicle is unable to receive a stop command signal from the LEU unless the VCU is first put into a wait mode. In the wait mode, the VCU is enabled to receive the stop command signal for a predetermined period. The VCU is put into the wait mode only upon a successful authorization at the vehicle. This feature also provides a certain amount of security and privacy to the public. It restricts law enforcement officers from arbitrarily disabling vehicles. It prevents unauthorized users of the LEU from disabling vehicles. It also prevents someone who has duplicated the stop command signal from disabling vehicles.

5. It is an important aspect of the claimed invention that the authorization be performed at the suspect vehicle and that an authorization acknowledgment be generated. The acknowledgment alerts the law enforcement officer that a successful authorization has occurred at the correct vehicle. This arrangement essentially ensures that the proper vehicle will be disabled. The law enforcement officer is proximate to the vehicle, and he/she transmits the stop command signal only after observing the authorization acknowledgment and confirming that the correct vehicle is authorized. In the preferred embodiment, the authorization acknowledgment is produced by energizing the flasher lights on the vehicle.

6. The invention has been demonstrated and exhibited at several invention shows and has won several invention awards. For example, the invention was demonstrated at the Invention New Products Exposition (INPEX) in Pittsburgh, Pennsylvania in May 1999, which is purported to be one of the largest invention shows in the world. INPEX showcases all types of inventions, new products and innovations to business and industry. The invention was demonstrated at the show by using real vehicles and a helicopter, and simulating a police chase. The invention was awarded the Grand Prize of the show, \$5,000, and it won three gold medals, in the Automotive, Safety/Security, and Life Saving Devices categories. It also won a bronze medal in the Electrical/Electronics

category. Attached as Exhibit A are true and correct copies of the gold and bronze medal certificates for the INPEX show.


7. A writer for a magazine called, "POLICE," observed a demonstration of the invention at the show. He wrote an article, published in the July 1999 edition of POLICE, which featured the invention and its demonstration at the INPEX show. Attached as Exhibit B is a copy of the article. The article quotes the Monroeville (PA) Police Chief, George Polnar, as saying: "This is one of the best things we've seen. There are a lot of devices out there to essentially eliminate pursuits but the difficulty is in getting in front of the pursuit. It's now possible to get the vehicle to stop (from behind)."

8. The invention also won gold medals at international invention shows in Nurnberg, Germany and Sofia, Bulgaria in 1999.

9. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

07-23-2004

Date


Elias J. Goletsas
Syracuse, New York

GOLD MEDAL

In the category of

Life Saving Devices

presented to

Elias John Goletsas

in recognition of the display of

F.A.N.G.S.

at

INPEX™ XV

America's Largest Invention Show

May 19-23, 1999

Pittsburgh, Pennsylvania

United States of America

L. Ellen Yarboll

L. Ellen Yarboll

Producer





GOLD MEDAL

in the category of
Automotive

presented to

Elias John Goletsas

in recognition of the display of

F.A.N.G.S.

at

INPEX™ XV

America's Largest Invention Show

May 19-23, 1999

Pittsburgh, Pennsylvania

United States of America

L. Ellen Yarnall

L. Ellen Yarnall
Producer





GOLD MEDAL

in the category of

Safety/Security

presented to

Elias John Goletsas

in recognition of the display of

FA.N.G.S.

at

INPEX™ XV

America's Largest Invention Show

May 19-23, 1999

Pittsburgh, Pennsylvania

United States of America


L. Ellen Yarnell

Producer



BRONZE MEDAL

in the category of

Electrical/Electronics

presented to

Elias John Goletsas

in recognition of the display of

H.A.N.G.S.

at

INPEX™ XV

America's Largest Invention Show

May 19-23, 1999

Pittsburgh, Pennsylvania

United States of America

J. Ellen Farrell

L. Ellen Yarell

Producer



358-A

Radio Device Could Put **FANGS** Into Police Pursuit Abilities

But will the invention, created by an upstate New York deputy sheriff and an engineer, get past car makers and a skeptical public?

BY DAN FRIO,
EDITORIAL ASSISTANT
POLICE

A recent invention co-developed by a sheriff's deputy and an engineer in New York could stop pursuits before they start.

Picture this: a patrol officer attempts to pull over a vehicle. The driver bolts instead and the officer gives chase. Reaching over to a laptop, the officer taps a few keys and the lights on the suspect's car begin flashing. Tapping a few more keys makes the horn blow madly. Though he may or may not be confused, our suspect is determined and continues on. The officer follows, waits for a safe spot and hits a few last buttons on the laptop.

The suspect's car slows and rolls to a halt. He is arrested and the pursuit is over nearly as soon as it began. No crashes. No injuries. No TV news helicopters. However far-fetched it seems, this scenario will be the norm if co-inventor Joseph Ligoci has his way. A sergeant with the Onondaga County (N.Y.) Sheriff's Office, Ligoci hopes to get the microchip he developed with partner John Goletsas installed in every new car on the nation's roads.

PHOTOS COURTESY LUKE GRACIE



FANGS co-inventor Sgt. Joseph Ligoci sits in a patrol car outfitted with the device. Capable of disabling an engine's acceleration, FANGS identifies a car through its vehicle identification number (VIN), and issues commands to its "brain" via radio frequency.

Dormant until engaged by a radio frequency, the microchip disables a vehicle's acceleration, while still allowing direction and braking control. Called FANGS (Frequency Activated Neutralization Generator System), the chip can make a vehicle's lights flash and horn blow to alert other drivers before disabling the gas pedal. Perhaps still several years off and needing approval from car makers and the feds, FANGS represents a significant step beyond road sticks and tire spikes.

"This is one of the best things we've seen," Monroeville (Pa.) Police Chief George Polnar told POLICE. "There are a lot of devices out there to essentially eliminate pursuits but the difficulty is in getting in front of the pursuit. It's now possible to get the vehicle to stop (from behind)."

Ligoci and Goletsas developed their patent-pending product in 1996 and deliv-

ered the first working model two years later. Ligoci is now busy showing FANGS at trade shows and exhibitions, using a private car with Onondaga Sheriff markings for demonstrations.

Polnar attended the recent **INPEX™** show, an invention exhibition held in Monroeville, and saw a FANGS demonstration. "It was impressive," he said. "I liked what I saw but it's still early. The serious hurdle to overcome includes getting (patrol) vehicles retrofitted with it."

The Experts Comment

Not only patrol cars, but also new cars will need the device. To do that, America's car manufacturers need persuasion. No agency will spend the money necessary to retrofit its cars if only a small percentage of cars on the road have the FANGS chip. According to POLICE auto-

motive writer Craig Peterson, auto makers have seen similar devices before, but haven't acted. Potential litigation, Peterson said, is a factor. He offers the scenario of a fleeing suspect turning a corner at high speed without engine power. The driver would likely lose control of the car and it would spin and collide with vehicles nearby. If a collision were the result of an officer's decision to cut the suspect's engine power, both the agency and auto manufacturer risk lawsuits.

"This is technology that will work," said Peterson, who, as a former racecar

Board. "This might place a bigger burden on law enforcement officers because we don't do anything ahead of the curve," Nowicki said. "We do everything when necessitated by the courts or outside influences. Maybe we can be ahead of the curve on this one."

Another possible glitch involves the criminal element quickly getting wise to the device. Though FANGS has an internal alarm, or "intruder alert," to notify authorities of tampering, its reliance on radio waves makes it susceptible to manipulation. "Any time you

have technology designed for good, somebody finds a way to use it for bad," said D.P. Van Blaricom, retired chief-of-police in Bellevue, Wash. An

"There are no magic answers. The trick is to find the most advantages and the least drawbacks," he said. "(FANGS) is another weapon in the arsenal but it's not the nuclear weapon."

Despite its potential bugs or drawbacks, the FANGS principle has its supporters. Nowicki warns of obstacles, including costs, logistics and public acceptance, but praises the idea. "If you can get something like this available to law enforcement, at a reasonable price, it can have tremendous applications," he said. "The only concern I have is: can you equip all those vehicles? Can you put it in every police vehicle?"

Technology and Issues

FANGS' effectiveness would depend on a chip inside every car in the road. This would seem an impossible order without some kind of federal mandate. With the general public wary of government interference in their lives, this "will take some public relations," Nowicki

told **POLICE**

When it's suggested that FANGS carries an element of privacy invasion, he said the public needs to weigh the pros and cons. "There's a balance — We have to ask ourselves: If you're a law-abiding citizen, is this something so chilling? You're always

going to have a certain element of the public who will object to it. And it's good for people to bring up the negatives on that. But can we balance that?"

Ligoci simply hopes people see the benefits. "I just want to make people understand this is for them," he said. "I want to be the person who helps humanity and who saves lives from these high-speed chases." ■

*Dan Frio is an editorial assistant on the staff of **POLICE**.*

*News about FANGS was received by **POLICE** at our deadline. This prevented sufficient time and editorial space to obtain and include comment from car manufacturers and law enforcement agencies.*

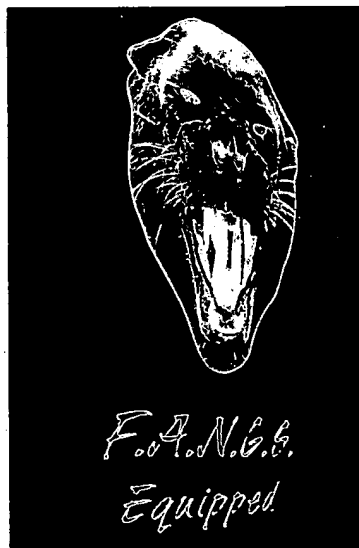
—Editor



Above: The FANGS team assembled at INPEX™. Sgt. Ligoci (in uniform) and engineer John Goletas (bottom, far right) began work on the device three years ago.

Right: The image seen on future patrol cars?

Far right: FANGS sets the SUV's lights flashing and horn blowing.



industry-recognized specialist and researcher on pursuits and occasional contributor to **POLICE** ("To Pursue or Not: The Big Question," Nov. '98), Blaricom is cautious, but optimistic about FANGS.

"This is a step in the right direction," he said. "It sounds like it could be useful in many situations. It's not without problems but I'd rather look at the potential."

According to Blaricom, who, as an expert witness in dozens of court cases has studied police pursuits across the country for years, no easy methods exist to end these chases. Ramming, road spikes and undercarriage electromagnetic scramblers all have their weaknesses.

driver and motorsports performance consultant to the industry, test drives and evaluates dozens of vehicles for **POLICE**'s annual "Transportation" issue each February. "But I doubt it will be used because of the liability to auto manufacturers. It'd be a tough sell."

Though no one welcomes a lawsuit, the threat of litigation can spur change. Law enforcement agencies are too often reactive, not proactive, according to Ed Nowicki, a law enforcement trainer, retired police officer of 31 years and longtime member of **POLICE**'s Advisory



ce. Capable identification

two years ago. FANGS is using a prior marking

INPEX™ is held in a demonstration. He said, "I like the idea of getting it."

ment

on new cars at, American persuasion. They need small per- have the **POLICE** auto-